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ABSTRACT

This paper describes: the development and implementation of Schoolwide Projects (SWPs) in the School District of Philadelphia (Pennsylvania); evaluation models permitted by Chapter 1 regulation and policy; ways these models were used in Philadelphia and results that were obtained; and approaches that are sensitive to the effects of SWPs. The initial implementation of the accountability provisions created by the 1988 reauthorization legislation is analyzed in depth. The impact of the different methods and their technical adequacy, and conclusions and implications for the 1993 Chapter 1 reauthorization are discussed. The study population consisted of Cohort 1 SWPs, whose accountability cycle began in the 1988-89 school year. The preprogram period spanned the school years 1985-86 to 1987-88; program years covered 1988-89 through 1990-91. The student participation information was obtained from the local education agencies' Chapter 1 Evaluation and Reporting System, which includes the data elements of school location, achievement test scores, and Chapter 1 services received. The techniques of maximizing aggregation while minimizing aggravation and other schools comparison analyses (non-proportional and proportional selection) were used. Various evaluation models permitted by the regulations produced markedly different conclusions about the effectiveness of SWPs. The evaluation models that were most likely to detect improvement in student achievement at a SWP site compared SWP students with Chapter 1 students at non-SWP sites during the same 3-year period. The weakest model compared SWP schools with their performance during the 3 years prior to implementation of the SWP. Fourteen data tables, 4 bar graphs, and a 19-item bibliography are included. (RLC)

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The School District of Philadelphia

THE MOMENT OF TRUTH: YEAR THREE CONTINUATION FOR SCHOOLWIDE PROJECTS

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The Moment of Truth: Year 3 Continuation Decisions For Schoolwides

The Changing Landscape of Chapter 1

Congress, in reauthorizing ESEA Chapter 1 in 1983, inserted a provision for Schoolwide Projects (SWPs) that permitted districts to ignore student eligibility requirements in those schools where 75% or more of the students are from low income families. Unlike other Chapter 1 resources that are used to provide additional services to students identified as educationally disadvantaged, SWPs are permitted to use Chapter 1 resources to improve the entire educational program of a school. This provided the opportunity to overcome achievement deficits without becoming entangled in the "supplement not supplant" constraint. Few districts took advantage of this provision because they were required to pay a matching share for all students in SWPs who were not eligible for Chapter 1 services. The most recent reauthorization in July 1988 removed this matching requirement. This change enabled districts to use Chapter 1 funds and staff in SWPs sites with complete flexibility. Today, there are 1,175 schoolwide projects in a potential universe of 5,337 Chapter 1 sites (LeTendre, 1991).

This paper has four major objectives:

1) To describe the events related to the development and implementation of Schoolwide Projects in the School District of Philadelphia

2) To describe the evaluation models that are permitted by Chapter 1 regulation and policy

3) To describe the ways these models were utilized in Philadelphia and to present results that were obtained

4) To identify the approaches that are most likely to be sensitive to the effects of SWP programs.

The paper concludes that various evaluation models permitted by the regulations produce markedly different conclusions about the effectiveness of SWPs. The evaluation models that were most likely to detect improvement in student achievement at an SWP site compared SWP students with Chapter 1 students at Non-SWP sites during the same three-year period. The weakest model compared SWP schools with their performance during the three years prior to implementation of SWP.

Part 1: Development and Implementation of SWPs in Philadelphia

Origins of Schoolwides in Philadelphia Public Schools

In 1983-84, the School District of Philadelphia launched a school improvement program in targeted schools with help from a local foundation. With the advent of the Chapter 1 Technical Amendments, the District opted to designate eleven Chapter 1 school sites as SWPs during the 1986-87 and paid the matching share that was required for non-eligible children receiving service. Therefore, when the Chapter 1 guidelines were changed in 1988, the District was prepared to expand the SWP program rapidly because an appropriate infrastructure was in

place.

Several events facilitated the rapid SWP expansion and implementation. First, the Superintendent formed a Regulatory Task Force in the mid-1980's to determine how resources from various categorical programs could be used to support the basic instructional program. Next, the Superintendent and Executive Director for Categorical Programs lobbied state and federal governments for greater flexibility (Lytle et al., 1990). Last, a Chapter 1 Task Force was established in 1987 and was charged with developing a program that would substantially improve the basic skills of Philadelphia's Chapter 1 students. In March 1988 Task Force Report proposed a two-year phase-in of a totally restructured Chapter 1 program for students at-risk. The primary goal was to foster student success in the regular program. The underlying principles of the restructuring were: (1) prevention rather than remediation (Task Force Report, 1988), (2) monitoring indicators of progress (Davidoff, Pierson and Fishman, 1989) and, (3) provision of additional support staff in each of the administrative subdistricts to enhance the school-based planning process initially established in 1984. In addition to the restructuring, a combination of the way the District calculated school eligibility, i.e., unduplicated count of AFDC and Free/Reduced Lunches (Lytle, 1988), a broadened needs assessment section in the annual application (Davidoff, 1988), and the cooperation of the Pennsylvania Department of Education were crucial.

Previous SWP Research in the Philadelphia Public Schools

Two papers reported the planning and implementation for Schoolwide Projects in the School District of Philadelphia from 1985 to 1989 (Lytle, Davidoff, Pierson, Kemp and Herron, 1990). A continued look at trends in attendance, report card marks, and NCE gains for the 37 Cohort 1 SWP sites, as well as an initial look at the 24 Cohort 2 SWP sites was reported by Davidoff and Pierson (1991).

In the first study, performance data available for year-to-year comparisons for three years (1987-1989) showed NCE gains in reading and mathematics of Chapter 1 eligible students in the 37 Cohort 1 SWP sites. From Spring 1988 to Spring 1989, gains in reading averaged 4.97 NCEs; gains in mathematics averaged 9.66 NCEs. Schoolwide Projects appeared to be providing the greatest benefit to the neediest students in each of these sites (Lytle et al., 1990).

In the second paper, evidence from a variety of indicators favored Schoolwide Project sites over other Chapter 1 Non-SWP sites/services. First, a higher percentage of SWP sites than Non-SWP sites made substantial progress on desired outcomes in the three statutory goals of Chapter 1. Second, a lower percentage of SWP sites were required to participate in mandated Chapter 1 Program Improvement. Third, when compared with the average of all the Chapter 1 reading and mathematics services, Schoolwide Projects sites were more likely than others to have positive results. Namely, students at SWP sites were more likely to have higher NCE gains or positive posttest scores, than other Chapter 1 projects serving similar grade ranges. Fourth, for ALL pupils within SWP sites, the data suggested improvement in report card marks across the major curriculum areas and in the pupils' Average Daily Attendance (Davidoff and Pierson, 1991).

Purpose of the Current Study

With the completion of the third year, each SWP site must pass two tests to continue as a Schoolwide Project school. First, it must establish that 75% or more of its students continue to meet the poverty criterion (Magliano, Conner, and Davidoff, 1991). Second, each SWP site must meet the federal mandatory accountability requirement.

Two approaches are offered by law (PL 100-297, Section 1015.e) and regulations (Federal Register, May 19, 1989, 21765-6) for addressing this accountability requirement:

(1) "The achievement gains of educationally deprived children in the school exceed the average achievement gains of **comparable participating Chapter 1 children** in the LEA as a whole: or

(2) The achievement gains of educationally deprived children in the school exceed the average achievement gains of **comparable educationally deprived children** in that school in the three fiscal years prior to the start of the schoolwide project" (Federal Register, May 19, 1989).

These approaches have become known as the Other Schools Comparison Model (OSC) and the Same School Comparison Model (SSC) respectively (Davis and Quilling, 1990). Both models require the SWP to exceed the gains of their respective comparison groups.

Nationwide, 1990-1991 was the first year in which the federal accountability provision was implemented. Therefore, the situation was very fluid. Many details required clarification and negotiation with the Pennsylvania State Department of Education and the federal Chapter 1 Office in an effort to agree on reasonable ways to determine whether SWP status enhanced a school's ability to meet the needs of its educationally deprived students.

Using the methods suggested by the law, the Chapter 1 Policy Manual and the position paper by Davis and Quilling (Draft, 1990), the current study provides an in-depth analysis of the initial implementation of the accountability provisions created by the 1988 re-authorization legislation. The impact of the different methods and their technical adequacy is explored. Conclusions and implications for the 1993 Chapter 1 reauthorization are discussed.

Part 2: Evaluation Models Permitted By SWP Chapter 1 Regulations

Available Models and underlying assumptions

Initially, to maximize its freedom of model selection, the School District of Philadelphia Chapter 1 Application stated its SWPs three year accountability objective in a manner that embraced both models. This would enable the District to decide which to use on a site by site basis. The objective was stated as follows:

"At the end of the third year, the achievement of educationally deprived students in a Schoolwide Project site will exceed the average achievement of such children in that school in the three fiscal years

prior to the initiation of the Schoolwide Project, as measured by appropriate subtests of the Citywide Testing Program, or, the achievement gains of educationally deprived students in each Schoolwide Project will exceed the average achievement gains of other participating Chapter 1 students in the District as a whole. Note: SWP Schools will be excluded from the computation of the LEA Chapter 1 average" (Annual Chapter 1 Applications, 1988, 1989, and 1990).

A number of premises flowed from this objective and from the Districts' understanding of the law, Chapter 1 Regulations, Policy Manual and the Davis and Quilling paper:

1) In order to continue as a SWP, a site must demonstrate that its achievement gains exceed those of its comparison group. However, the decision to use the SSC Model or the OSC Model may be made on a school by school basis.

2) Since both reading and mathematics were provided to the comparison groups, the SWP continuation analyses must include both service areas (Davis et al., p. 2).

3) Because all grades were served in the comparison groups, the continuation analyses must include all grade levels in the school organization (Davis et al., p. 6). Furthermore, to be consistent with Chapter 1 requirements, the analyses, at a minimum, must include measures of Basic and More Advanced skills (Davis et al., p. 4).

4) For either the SSC or OSC evaluation model, the decision whether to base the evaluation on the final program year (1991) or the average of three program years (1988-89, 1989-90, 1990-91) could be made by the LEA on a school-by-school basis (Davis et al., pp. 9 & 12).

5) For schools using the OSC evaluation model, the Local Education Agency (LEA) had the option of selecting students in the SWPs by the proportional technique (Davis et al., pp. 8 & 9) or by including all Chapter 1 students whose scores fell below the LEA's Chapter 1 eligibility criterion (Davis, personal communication, August, 1991).

6) Subject to SEA approval, additional measures may be used (Davis et al., p. 3).

Population and data sources

The population for this study consisted of thirty-seven (37) Cohort 1 SWPs whose accountability cycle began in the 1988-89 school year. The preprogram period spanned the school years 1985-86 to 1987-88; program years covered 1988-89 through 1990-91.

The pupil participation information was obtained from the LEA's Chapter 1 Evaluation and Reporting System (CHIERS). CHIERS is an annually updated system for gathering and reporting pupil information regarding the Philadelphia Chapter 1 program. The data elements that are included in CHIERS are: School location, achievement test scores, and Chapter 1 services received.

To obtain standardized test scores, the LEA uses a customized version of CTBS, Form U, published by CTB McMillian-McGraw Hill. It is the most recent version of the instrument and is capable of generating both norm-referenced (NRT) and criterion-refrenced (CRT) scores. The June testing dates fall within the acceptable norming dates provided by the publisher for this instrument. The NRT Reading/Language Arts and Mathematics tests contained provisions for both basic and advanced skills items.

Consistent with the Chapter 1 Policy Manual, when only a test of advanced skills is available, the same test is used as a measure for both requirements. Scoring is provided by the publisher employing industry standards for quality control. By District policy, all children are tested on level. Since the eligibility is established during the mid-year testing program, corrections for regression to the mean are not necessary. For grades 2-8, NCE gains in Reading/Language Arts, Mathematics Computation, and Mathematics Concepts and Applications are reported. For kindergarten, there was no pre-score on any measure used consistently across Chapter 1 sites, and hence no gain could be calculated. Therefore, for kindergarten comparisons, the LEA used the only available measure across all schools and all years: the mean percent correct (PCTC) on the Citywide Criterion-Referenced Test (CRT). Although NCE gains were available for grade 1, the Pennsylvania Department of Education (PDE), Technical Assistance Center (TAC) and United States Department of Education reviewing team insisted that the evaluation "should be based on some other measure" (Sheffer, 1991). Therefore, mean percent correct on the spring administration of the CRT in Reading and Mathematics was used for grade 1 also.

Part 3: Evaluation Models Used and Results Found

The Analysis Technique: Maximizing aggregation while minimizing aggravation

The data analysis techniques followed a consistent, wholistic approach that enabled grades (K, 1, 2-end grade), service area (Reading and Mathematics) and school years to be combined into a single analysis; steps differed somewhat depending on whether the OSC Model or SSC Model was used. The data display enabled the Local Education Agency (LEA) to select either the "three year aggregate" or the "third year only" option. In making comparisons across grades, all grades were given a weight of 1.00 except kindergarten. Since kindergarten was mostly half-day and since the level of service in comparison groups was minimal, kindergarten was given a weight of 0.25. Also, since the LEA's single norm-reference reading test covered both basic and advanced skills, it was weighted as 2.00; the mathematics subtests (basic and advanced) were weighted 1.00 each. Since there were several instances where the number of students at a given grade level was less than 25, grade 2 through end-grade was aggregated into a whole school comparison. The later technique was a requirement of the PDE, TAC and US Department of Education (Sheffer, 1991).

The standard for success was that the preponderance of evidence from a SWP site favor the Schoolwide program (Davis et al., pp. 5 & 6). This was obtained by dividing the number of positive comparisons by the

total number of comparisons; results larger than fifty percent (50%) were interpreted as favoring the continuation of the site as a SWP. Subsequent sections and data in the Appendix illustrate the application of the evaluation models.

Other Schools Comparison Analysis: Non-Proportional Selection Technique

In Table 1 below, and Tables 2 and 3 in Appendix 1-A, School 130 is used as an example. This site was compared to the appropriate grades in the aggregate of the Chapter 1 Non-SWP LEA sites for Reading, Mathematics Computation, and Mathematics Concepts and Applications. The data in these Tables included all of the eligible students available (non-proportional selection). If the comparison favored the SWP, a value of 0.25 was generated for kindergarten, and 1.0 for grade 1. If the aggregate of 2 through end-grade favored the SWP, a value equal to that number of grades in School 130's grade organization was generated. For example, in Table 1 during 1990-91, the kindergarten LEA exceeded the SWP site (0.0), the SWP grade 1 exceeded the LEA (+1.0) and the SWP in grades 2-end exceeded the LEA (+3.0). The aggregation resulted in 4 positive comparisons divided by a total of 4.25 comparisons for the third year. Similarly, aggregation across the three program years resulted in nine (9) favorable comparisons of 13.75 possible comparisons.

Table 1
Cohort 1 SWP Other Schools Comparison Non-Proportional Analyses
Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains

School 130 Reading/Language Arts

	1988-89			1989-90			1990-91		
Grade Level	SWP Site	LEA Sites	Outcome	SWP Site	LEA Sites	Outcome	SWP Site	LEA Sites	Outcome
K	60.21	61.90	0.0	55.03	61.70	0.0	57.94	61.02	0.0
1	63.12	61.57	1.0	64.68	62.26	1.0	65.60	62.94	1.0
2	-1.76	-0.11		2.20	-1.28		0.31	-1.54	
3	7.30	6.79		6.73	5.87		2.83	3.05	
4	1.27	3.80		-1.12	0.80		1.30	-0.27	
5	0.56	0.28		No Grade 5			No Grade 5		
2-End	2.17	2.86	0.0	2.70	2.01	3.0	1.61	0.51	3.0
SWP N	504			368			387		

	Positive Comparisons Divided By Total Comparisons
Annual Result	1.00/5.25 4.00/4.25 4.00/4.25
3 Year Total	9.00/13.75

Table 4 displays the aggregation or combining of the results from Table 1, 2, and 3 using the weighting and aggregation rules cited above. Reading, a single test was weighted twice; the two mathematics subtests were weighted one. Dividing the number of positive comparisons by the total number of comparisons yielded the percentage of

comparisons favoring the SWP. When the value exceeded fifty percent (50%) for either the three year aggregate or for the third year, the preponderence of evidence was interpreted as favoring the SWP site for continuation. As shown in Table 4, School 130 would have met both criteria: The three year combined comparison was 53.64 percent, and the third year comparison equalled 94.11 percent.

Table 4
Cohort 1 SWP Other Schools Comparison Non-Proportional Analyses
Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains

School 130 — Aggregated Achievement Results

Service Areas	1988-89		1989-90		1990-91	
	Weighted Comparisons					
	+	N	+	N	+	N
Reading	2.00	10.50	8.00	8.50	8.00	8.50
Mathematics						
Computation	0.25	5.25	3.00	4.25	4.00	4.25
Concepts	0.25	5.25	0.00	4.25	4.00	4.25
Combined Math	0.50	10.50	3.00	8.50	8.00	8.50
Total	2.50	21.00	11.00	17.00	16.00	17.00

Criterion Met	1988-89	1989-90	1990-91	3 Year
	No	Yes	Yes	Yes
	11.90%	64.70%	94.11%	53.64%

3 Year Combined Comparison = 53.64% favoring continuation

Other Schools Comparison Model: Proportional Selection Technique

In Table 5 below and Tables 6 and 7 in Appendix 1-B, School 130 is again compared to the appropriate grades in the Chapter 1 Non-SWP LEA sites for Reading, Mathematics Computation and Mathematics Concepts and Applications. This time, the data in these Tables are composed of a sample of the eligible, deprived students chosen by proportional selection. This type of comparison is based on a sample that is less biased against the schoolwide project site "by selecting groups so that they represent the same proportion of the larger pool of students from which they were selected" (Davis et al., 1990, p. 8). The sample was chosen by determining the proportion of students in the Non-SWP sites of the LEA Chapter 1 Program in each grade for each subject area. Then, identification of a corresponding proportion of students within the SWP site of those who would be served in Chapter 1 in the absence of the SWP project was made by rank ordering the students by need (using same selection criteria used in the LEA) and selecting them from the bottom up (Davis et al., 1990). The analyses and weighting rules were the same as those used in the non-proportional selection technique.

Table 5
Cohort 1 SWP Other Schools Comparison Proportional Analyses
Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains

School 130 Reading/Language Arts

Grade Level	1988-89 SWP Site	1988-89 LEA Sites	1988-89 Outcome	1989-90 SWP Site	1989-90 LEA Sites	1989-90 Outcome	1990-91 SWP Site	1990-91 LEA Sites	1990-91 Outcome
K	60.21	61.90	0.0	55.03	61.70	0.0	57.94	61.02	0.0
1	59.41	61.57	0.0	61.95	62.26	0.0	61.01	62.94	0.0
2	-4.72	-0.11		4.69	-1.28		5.45	-1.54	
3	8.88	6.79		8.21	5.87		2.38	3.05	
4	-0.77	3.80		-1.76	0.80		3.94	-0.27	
5	-1.94	0.28		No Grade 5			No Grade 5		
2-End	0.49	2.86	0.0	4.32	2.01	3.0	3.83	0.51	3.0
SWP N	405			281			277		

	Positive Comparisons Divided By	Total Comparisons
Annual Result	0.00/5.25	3.00/4.25
3 Year Total	3.00/4.25	6.00/13.75

Table 8 displays the aggregation or combining of the results shown in Table 5, 6, and 7 using the weighting rules cited previously. Using the OSC proportional selection, School 130 would have met only one criterion, the third year comparison. It would not have met the three year combined comparison which yielded a value of 39.09 percent.

Table 8
Cohort 1 SWP Other Schools Comparison Proportional Analyses
Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains
School 130 Aggregated Achievement Results

Service Areas	1988-89 Comparisons +	1988-89 Comparisons N	1989-90 Comparisons +	1989-90 Comparisons N	1990-91 Comparisons +	1990-91 Comparisons N
Reading	0.00	10.50	6.00	8.50	6.00	8.50
Mathematics						
Computation	0.25	5.25	3.00	4.25	4.00	4.25
Concepts	0.25	5.25	0.00	4.25	4.00	4.25
Combined Math	0.50	10.50	3.00	8.50	8.00	8.50
Total	0.50	21.00	9.00	17.00	12.00	17.00

Criterion Met	1988-89	1989-90	1990-91	3 Year
	No	Yes	Yes	No
	2.38%	52.9%	70.6%	39.09%

3 Year Combined Comparison = 39.09% favoring not continuing

Summary of All Sites: Other School Comparison Models

Table 9 contains a summary of the results for each SWP site, Other School Analyses, proportional and non-proportional selection, three year average and third year only.

Table 9
Cohort 1 Schools, Continuation Analyses 1988-89, 1989-90 and 1990-91.
Comparison of Other School Comparison Methods
Proportional and Non-Proportional Selection

			Proportional Selection		Non-Proportional Selection	
Code	Name	Grade Range	Percent Positive Findings 3 Yr Avg A	3rd Yr only B	Percent Positive Findings 3 Yr Avg C	3rd Yr only D
130	Harrington	K-4	39.09%	70.59%	53.64%	94.12%
136	McMichael	K-8	85.35%	100.00%	85.35%	100.00%
143	Wilson	K-5	50.00%	71.43%	53.17%	71.43%
*153	Leidy	K-5	50.79%	76.19%	31.75%	47.62%
220	Alcorn	K-4	66.50%	88.24%	64.53%	76.47%
242	Reynolds	K-5	51.49%	95.24%	59.23%	57.14%
243	Palumbo	K-8	64.80%	78.13%	73.98%	50.00%
249	Waring	K-8	70.53%	84.85%	61.29%	42.42%
254	Key	K-5	64.00%	59.52%	64.00%	59.52%
259	Nebinger	K-8	59.04%	28.57%	50.54%	28.57%
273	Washington	K-8	38.89%	0.00%	62.12%	0.00%
427	Dick	K-5	52.99%	78.57%	64.43%	88.10%
430	Heston	K-5	47.62%	57.14%	57.14%	38.10%
431	Kenderton	K-5	69.40%	100.00%	82.39%	80.95%
440	Stanton,MH	K-5	64.18%	95.24%	89.71%	95.24%
442	Walton	K-5	61.90%	85.29%	84.13%	97.06%
*443	Whittier	K-4	52.94%	94.12%	66.67%	94.12%
*444	Allen , E	K-4	51.96%	64.71%	36.27%	64.71%
446	Duckrey	K-5	38.81%	57.14%	49.25%	28.57%
451	Douglass,F	K-5	32.84%	76.19%	35.82%	38.10%
453	Gideon	K-5	56.72%	80.95%	37.31%	52.38%
457	Meade	K-5	25.37%	76.19%	13.43%	38.10%
526	Elkin	K-5	33.33%	76.19%	68.25%	95.24%
530	Hackett	K-5	57.94%	95.24%	70.63%	95.24%
531	Harrison	K-5	76.19%	78.57%	56.92%	40.48%
532	Hartranft	K-5	38.10%	76.19%	34.92%	28.57%
534	Ludlow	K-5	80.16%	88.10%	76.98%	97.62%
535	McKinley	K-5	77.78%	97.62%	74.60%	97.62%
547	Cramp	K-5	69.49%	73.53%	67.21%	76.32%
548	Kearny	K-5	52.00%	52.38%	42.40%	23.81%
556	Spring Gdn	K-5	55.56%	61.90%	90.48%	100.00%
632	Mifflin	K-8	56.63%	98.48%	42.35%	56.06%

Table 9 Continued

Code	Name	Grade Range	Proportional Selection: Percent Positive Findings 3 Yr Avg A	Proportional Selection: Percent Positive Findings 3rd Yr only B	Non-Proportional Selection: Percent Positive Findings 3 Yr Avg C	Non-Proportional Selection: Percent Positive Findings 3rd Yr only D
643	Wister	K-6	64.08%	80.95%	86.00%	80.95%
644	Linglebach	K-5	70.63%	80.95%	77.69%	42.86%
647	Kelly, JB	K-4	62.75%	82.35%	69.81%	29.41%
738	McClure	K-4	24.51%	70.59%	27.97%	94.12%
744	Taylor	K-4	70.59%	70.59%	50.98%	82.35%
37 Schools Eligible			24	32	26	21
Not-Eligible/SES			3	3	3	3
Not-Eligible/Achieve			10	2	8	13

*Note: Of the 37 Cohort 1 SWPs, three sites dropped below the federally required poverty level of 75% and were not eligible for continuation as a SWP for 1991-92. To insure completeness and to provide continuity with prior reports, these schools' results are also reported.

Each of the thirty-seven Cohort 1 SWP sites met the federal achievement standard on one or more of the comparisons generated by the four types of Other School Comparisons displayed in Table 9. Sixteen (16) sites met it by all four types of the OSC analyses; eleven (11) by three of the four comparisons; five (5) sites by two comparisons and five (5) by one comparison. The analyses were reviewed and validated by both the Technical Assistance Center (TAC) and Research for Better Schools, a non-profit third-party evaluation firm under contract to the Pennsylvania State Department of Education (PDE). The results have been reviewed and approved by the Pennsylvania State Department of Education.

Congruence Between Continuation Decisions: Other Schools Comparison

To examine the congruence between the continuation decisions generated by the four varieties found within the Other Schools Comparison Model, the percentages in Table 9 were converted to an arcsin transformation (see Appendix 1-C) and a correlation matrix was computed as shown in Table 9a. The arcsin transformation is commonly used with percentages (proportions) because distributions of proportions tend to have variances that are a function of their mean. The arcsin transformation tends to stabilize this effect (Winer, 1962, p. 221).

Table 9a
Correlations between the types of Other Schools Comparisons Decisions

	Proportional Selection		Non-Proportional Selection	
	3 Yr Avg	3rd Yr only	3 Yr Avg	3rd Yr only
	A	B	C	D
A.	1.00			
B.	.47*	1.00		
C.	.62**	.36	1.00	
D.	.28	.52**	.56**	1.00

For df = 35, * = p<.05, ** = p<.01

Proportional vs. Non-proportional Sampling Three Year Average

Independent of the selection (sampling) technique, Proportional versus Non-proportional, the decisions based on the "three year average" aggregation method were consistent. While the absolute value of the results in Table 9 between the proportional and non-proportional selection procedures varied considerably (from 0 to 35 percentage points) the decision to continue or not to continue was the same for 27 site (72.9%). The highest correlation among the selection techniques was the correlation between the techniques that used the three year average, ($r = .62$ $p<.01$). This high correlation resulted from the greater reliability found when three measures are averaged. See Table 9 and Table 9a row C of column A.

Non-proportional Sampling: Three Year Average vs. Third Year Only

The next highest relationship was found between the two Non-Proportional selection technique. This resulted in consistent agreement for 25 site (67.6%) and $r = .56$ ($p<.01$). See Table 9 and Table 9a row D of column C.

Proportional vs. Non-proportional Sampling Third Year Only

The continuation decisions derived from proportional and non-proportional sampling of third year data only were similar to each other. The two techniques resulted in the same decision for 25 sites (67.6%). The magnitude of the differences in percentage points in Table 9 between the proportional and non-proportional methods varied from 0 to 53 percentage points and the correlation dropped to .52 ($p<.01$). The lower correlation is most likely the result of using a single data point rather than a more reliable average of several years. See Table 9 and Table 9a row D of column B.

Proportional Sampling: Three Year Average vs. Third Year Only

Comparisons between the two types of the Proportional selection sampling technique (three year average vs. third year only),

resulted in consistent continuation decision agreement for 27 sites (72.9%) and r = .47 ($p<.05$). This was the lowest statistically significant relationship. It may be reflecting the restriction of range in pupil scores in an analysis that requires that pupils be selected from the lowest scoring up until a specific proportion has been reached. See Table 9 and Table 9a row B of column A.

Concluding Observations Regarding The Other Schools Comparison Model

Although most of the correlations shown in Table 9a are significant, they are generally lower in magnitude than the .7+ range commonly accepted for reliability. The overall pattern of the correlations is consistent with the effects of variations in the degrees of freedom and underlying restrictions in range of pupil scores. Even the lowest correlations provide information about the "incongruence" of the measures, suggesting that the Proportional Three Year Average measures and the Non-Proportional Third Year Only may be unrelated. See Table 9a, row D of column A, r = .28, $p>.05$; row C of column B, r = .36, $p>.05$. The interpretation of the correlations among the indicators suggests that consistency is maximized by increasing the degrees of freedom by averaging over three years and by not restricting the range of pupil scores as required by the Proportional Selection technique. The Non-Proportional Selection three year average technique appears to reduce errors of measurement and therefore most likely reflects a more accurate picture of a school's achievement as measured by NCE gain than the Proportional Selection third year only technique.

Some Concluding History Regarding The Other Schools Comparison Model

On the basis of continuous monitoring and two previous studies (Lytle et al., 1990 and Davidoff et al., 1991), the District anticipated that the Other Schools Comparison Model would most likely be its technique of choice. As early as January 1991, Davidoff reported "Although NCE gains made during the fifth year (i.e., 3 year preprogram and 2 year program) in both reading and mathematics were largely positive, the data suggest that the Other School Comparison technique (Davis and Quilling, 1990) should be considered when analyzing the data required to document continuation under the accountability requirements for SWPs -- particularly in mathematics" (Davidoff et al., 1991). In April 1991, the District conducted a preliminary investigation of the Other Schools Comparison Model using two years of achievement data (1988-89 and 1989-90). Two aggregation approaches were tested: grade by grade comparison vs grade 2 through end-grade comparison. Independent of the aggregation technique, the data revealed that in 92% of the cases, the same continuation decision was attained. Furthermore, if this had been the third year, 29 SWPs would have continued. The addition of the third year (1990-91) confirmed these preliminary findings.

Same School Comparison Analyses

Later in the Fall of 1991, the District investigated the Same School Comparison Model. The Same School Comparison used a similar approach, weighting rules and aggregation techniques as the OSC Model except that the comparison groups consisted of the achievement gains of educationally disadvantaged students in the same school for the three years prior to the start of the schoolwide project rather than

participating children in the non-SWP sites. The validity of this comparison exists to the extent that equivalent groups were compared across time. This was accomplished by identifying students who would have been served in Chapter 1 in that school in the absence of a schoolwide project (Davis et al., 1990, p.11).

In 1988-89, the School District revised its Chapter 1 selection criteria in order to concentrate resources on the poorer performing students whose standardized test scores were below the 41st national percentile rank (NPR) in grades K-4 and below the 26th NPR in grades 5-8. In addition, many schools were reorganized from K-6 to K-5 or K-4. It was therefore necessary to reconstruct the preprogram comparison groups employing the most restrictive parameters, with grades not part of the SWP site during the 1990-91 school year and students above the new Chapter 1 cut scores excluded.

Table 10 below displays the same school reading comparisons for School 220 for the 3 year program average (1989-91) and the third year only (1990-91) with that school's three year preprogram baseline (1986-88). Similar data for the mathematics tests are shown in Tables 11 and 12 in Appendix 1-D. As shown in Table 10, at School 220, kindergarten and first grade students met the criterion of improving the percent correct on the reading test of the Citywide Test for their grade. However, students in grades 2 to 4 did not meet either criteria based on NCE gain score for their grade. The three-year average gain was 1.33 for these students, as compared to 5.64 during the pre-program years.

Table 10
Cohort 1 SWP Same School Comparison Three Year Average and Third Year Analyses Citywide Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains

School 220 Reading\Language Arts

Grade Level	Number of Pupils 1986 1987 1988 Pre-Program Years			Average 1986-88	Number of Pupils 1989 1990 1991 Program Years			Average 1989-91 3 Yr Avg	Average 1990-91 3rd Yr
K	53	71	53	59.69	47	37	55	62.85	61.43
1	61	69	80	48.93	64	53	51	60.83	61.01
2	107	86	64	3.46	60	45	60	0.01	-3.93
3	88	119	92	9.45	53	55	72	3.95	3.97
4	87	71	85	4.02	61	47	50	2.89	3.84
2-End				5.64				2.28	1.33
								3 Yr Avg	3rd Year
Positive/Total Comparisons								1.25/4.25	1.25/4.25

The data displayed in Table 13 illustrates the aggregation of the reading and mathematics results shown in Tables 10, 11, and 12 using the weighting rules cited in the Analysis technique section of this report. The aggregated results show that School 220 did not meet the Chapter 1 SWP criterion for only 29.4 percent of the comparisons were

positive, regardless of whether the three-year average or the third year only method was employed. The standard of obtaining more than fifty percent positive comparisons was not met.

Table 13
Cohort 1 SWP Same School Comparison Analyses
Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gain

School 220 Aggregated Achievement Results

Service Areas	1986-88	1989-91	1990-91
	Total Comparisons	Positive Comparisons	Positive Comparisons
Reading	8.50	2.50	2.50
Mathematics			
Computation	4.25	1.25	1.25
Concepts	4.25	1.25	1.25
Combined Math	8.50	2.50	2.50
Total	17.00	5.00	5.00

Summary	Three Year Average 1989-91	Third Year Result 1990-91
Criterion Met	No	No
	29.4%	29.4%

Summary of Same School Analyses

Table 14 contains a summary of the results for each SWP site, Same School Analysis, three year average and third year only. School 547 was the only schoolwide site that successfully met the federal accountability standard required by this model since the majority of comparisons for the third year favored this site in comparison to its' three year preprogram average. See Appendix 1-E.

Table 14
Cohort 1 School Continuation Analyses 1989-91
Same School Comparison Methods

Code	Name	Grade Range	Percent Of Positive Findings 3 Year Avg	3rd Year only
130	Harrington	K-4	26.47%	26.47%
136	McMichael	K-8	15.15%	15.15%
143	Wilson	K-5	23.81%	23.81%
*153	Leidy	K-5	21.43%	21.43%
220	Alcorn	K-4	29.41%	29.41%
242	Reynolds	K-5	21.43%	21.43%
243	Palumbo	K-8	6.25%	6.25%

Table 14 Continued
Cohort 1 School Continuation Analyses 1989-91
Same School Comparison Methods

249	Waring	K-8	10.00%	20.00%
254	Key	K-5	23.81%	21.43%
259	Nebinger	K-8	14.29%	14.29%
273	Washington, Geo.	K-8	13.64%	7.58%
427	Dick	K-5	23.81%	21.43%
430	Heston	K-5	21.43%	21.43%
431	Kenderton	K-5	21.43%	21.43%
440	Stanton, M H	K-5	23.81%	23.81%
442	Walton	K-5	23.53%	23.53%
*443	Whittier	K-4	26.47%	26.47%
*444	Allen , E D	K-4	26.47%	23.53%
446	Duckrey	K-5	21.05%	21.05%
451	Douglass, F.	K-5	23.81%	21.43%
453	Gideon	K-5	21.43%	21.43%
457	Meade	K-5	11.90%	21.43%
526	Elkin	K-5	26.32%	42.11%
530	Hackett	K-5	19.05%	19.05%
531	Harrison	K-5	23.81%	23.81%
532	Hartranft	K-5	21.43%	21.43%
534	Ludlow	K-5	23.81%	21.43%
535	McKinley	K-5	23.81%	42.86%
547	Cramp	K-5	26.32%	84.21%
548	Kearny	K-5	23.81%	23.81%
556	Spring Garden	K-5	23.81%	23.81%
632	Mifflin	K-8	15.15%	13.64%
643	Wister	K-6	23.81%	23.81%
644	Linglebach	K-5	21.43%	23.81%
647	Kelly, J B	K-4	26.47%	23.53%
738	McClure	K-4	26.47%	23.53%
744	Taylor	K-4	29.41%	26.47%
37 Schools				
Eligible			0	1
Not-Eligible/SES			3	3
Not-Eligible/Achievement			34	33

Comparisons within the Same School Models (three year average vs third year result), resulted in consistent continuation decisions for 36 of the 37 sites (97.3%); $r = .49$ ($p < .01$).

Part 4: Approaches That are Most Sensitive to SWP Effects

Discussion of the two accountability approaches

The purpose of the SWP accountability requirement is to determine whether Chapter 1 students are learning more in a Schoolwide Project school than they would in a traditional Chapter 1 project targeted at serving individual educationally deprived students. The choices for comparison groups are legally specified as either other Chapter 1

children in Non-Schoolwide sites or to "students who would have been served by Chapter 1 in that same school in the absence of a schoolwide project" (Davis et al., 1990). The later model selects children from those who attended the school in the three years prior to becoming a schoolwide project.

Although both approaches would appear to have merit, the models seem to operate very differently. The current study found vast differences in the continuation decisions generated by the models. Every SWP site attained one or more of the different OSC criteria and only one SWP site attained one of the SSC criteria. There are several reasons that may explain these differences. In the Philadelphia Public Schools, the preprogram years (1985-1988), were characterized by far reaching educational reform. The curricula was revised and standardized, a promotion-retention policy was implemented, a new testing program was introduced, and resources were targeted more effectively to the schools. During this period, large achievement gains were enjoyed by all schools --Chapter 1 and Non-Chapter 1; those that were to become schoolwides as well as those that remained Non-SWP. Although the gains have continued, the size of the change scores during the 1989-1991 period were not as large as those realized in the earlier years. The consequence of this history and the characteristics of gain scores appears to have resulted in a preprogram track record for the Cohort 1 schoolwide projects that became unbeatable. In a prior study, (that did not include kindergarten and grade 1), a comparison between the average of the three year preprogram track records of the 37 Cohort 1 SWPs and their two year program average indicated that sixteen schools would not continue unless they realized large gains in reading during their third program year; twenty-eight required enormous gains in mathematics (Davidoff and Pierson, 1991).

The SSC Model's assumption that reconstructing comparison groups based upon the most restrictive service parameters will compensate for these types of "real world" changes and equalize the comparison groups across time is appealing. There are other underlying characteristics of the Same School Comparison Model that must be taken into consideration. This model is apparently compromised by changes in the population served that stemmed from modifications of Chapter 1 eligibility criteria and the grades served by elementary schools. Under these conditions, identifying and comparing children who would have been served within the Chapter 1 program in the absence of schoolwide projects during the preprogram years with those actually served during the program years may not have provided a valid comparison across time. Apparently, within the Same School Comparison Model, a "level of noise" (i.e. amount of change) may be encountered that can overwhelm the real effects of the program and distort the results. Districts whose circumstances have changed appreciably over the six year accountability period would be wise to avoid this Model until further studies are conducted.

The Other Schools Comparison Model controls for history because it is unaffected by a variety of changes that occur and accumulate in the school district as a whole. Unlike the Same School Comparison Model actual Chapter 1 participants are always compared, not those who would have, should have, or could have been served!

However, one could raise serious reservations about the Proportional selection technique. Currently, there is no empirical evidence to indicate that this technique produces program and comparison samples that regress to the mean equally. In fact, this approach seems to depend on selecting the very children whose test scores would most likely regress to the mean unequally. While one could argue that the similarities between the decisions generated by the Proportional and Non-proportional selection techniques in this study hardly merits further discussion, it could be a problem in other LEAs. To avoid such problems, the Philadelphia School District has always separated its selection test from its pretest. The separate selection test technique is also considered to be an appropriate method for controling regression to the mean (Tallmadge, 1981). Further investigation seems apropos in districts before using proportional selection technique where the selecting test is NOT separate from the pretest.

Finally, where appropriate, a district should use a model that will allow it to combine the areas of instruction, grade levels served, and basic and advanced skills scores into ONE overall analysis. By using a single comprehensive approach that compares the number of positive comparisons to the total number of comparisons, a wholistic case may be made using the proponderence of evidence and aggregated achievement required by law and regulation. A more fragmentary approach will most likely increase the complexity of the decision-making rules that in turn may create "double jeopardy" for the Schoolwide Project. For example, one can envision a SWP site obtaining favorable results in mathematics and unfavorable results in reading, an outcome which would make the decision to continue it ambiguous.

The Ghosts of Future Evaluations

The 1988 reauthorization of Chapter 1 of the Educational Consolidation and Improvement Amendments caused the most comprehensive changes in the twenty-six history of this legislation. The Hawkins-Stafford amendments shifted the emphasis from a compliance oriented financial aid program to quality centered compensatory education focused on the helping low achieving students in economically disadvantaged schools catch up and keep up with their more advantaged peers. The Legislation was designed to reflect the recent literature dealing with effective schools, school change, school-based management, and site accountability. The new law with its standards and accountability provisions, has certainly captured the "hearts and minds" of local school district Chapter 1 staff and evaluation personnel! Clayton (1991) observed "that any model of assessing student and school progress will sometimes lead to error, declaring growth that has not occurred or in labeling as 'in trouble' those who are progressing. When judgments have few or no consequences, then issues about the measures used and the way in that they are interpreted are moot....However, when the stakes become high... especially the decisions about schoolwide project continuation, issues that were formerly seen as technical and trivial become highly salient" (p.347).

The new law has retained and venerated the "time tested" Chapter 1 normed referenced model. Unfortunately, local applications of the available federal evaluation model have not kept pace with the school

improvement and schoolwide project accountability requirements. It is not our position that the NCE metric is the "Darth Vader" of the measurement world and that standardized testing comprises the "Evil Empire"; However, "more may be expected from gain scores than they can reasonably be expected to provide" (Linn and Slinde, 1977, p.147). The equipercentile norm-referenced evaluation model was designed to provide a national estimate of program impact. It seems "Measurement error becomes a serious threat when the current procedure is applied to a smaller unit of analysis (i.e., schools)... "(LeTendre, 1991 p.332). As Davis (1991) points out, "...norm-referenced tests used in Chapter 1 evaluations are generally highly reliable, but the reliability of gains is far lower" (p.383). In an especially well-designed study, Davis demonstrated that given the negative correlation between pretest and NCE gains, schools with higher pretests were most likely to be identified for program improvement. The current study also suggested that the available SWPs continuation decision models, which depend upon aggregated gain scores, require further investigation to avoid the dual dangers of either failing to detect ineffective schools or of mislabeling successful schools as failures (Clayton, 1991). The most commonly offered solution to these problems is cautioning Districts about allowing themselves to be judged based on a single measure. Districts are advised and urged to use multiple measures. Yet, as the current Regulations are now interpreted, the use of multiple indicators produces multiple jeopardy; they are additional hurdles to be jumped in a high stakes accountability race! This is the result of the failure to provide a method of considering multiple measures when they do not lead to a common outcome (LeTendre, 1991). As Clayton (1991) asks, "How can we be responsive to the general pattern of data without overreacting to any particular measure?" (p.349). As we approach the 1993 Chapter 1 reauthorization, let us remember that Tallmadge (1982, p.107), a developer of the norm-referenced model, stated "It is theoretically impossible to separate the impact of the intervention from the rest of the school program" (cited by Davis, 1991). If the task was not possible prior to the creation of schoolwide projects, how can we now disentangle Chapter 1 from the regular school program in SWPs sites? They are truly the same in a Schoolwide Project site that has properly implemented its program! Instead, let us refocus our efforts on developing and refining appropriate indicators such as reducing the number of students in need of remedial service (Slavin and Madden, 1991), post NCEs of the same students over time, percent of pupils with positive NCE changes, CRT gap reduction indicators, and exit/entrance rate indicators (Davidoff et al., 1989) (See Appendixes 1-F, 1-G and 1-H). Perhaps the SWPs continuation decision sections of the 1993 reauthorization should consider using teacher marks, promote /retain decisions, CRTs and other performance assessment to determine success in the regular program and on-level performance --instead of primary dependence upon the normed-referenced gain score. The former is the common way "business is conducted" in real classrooms; the latter is seen as more distant to daily instruction. If these alternative indicators can be used in conjunction with the increasing varieties of performance assessment devices/techniques and these results can be analyzed within the framework of triangulation as suggested by Mathison (1988), then congruence between helping children in SWP sites succeed in the regular program while avoiding the consequence of errors caused by "declaring growth that has not occurred or in labeling progress as in trouble" may be attained (Clayton, 1991, p.347).

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APPENDIX

Appendix A-1

Table 2
Cohort 1 SWP Other Schools Comparison Non-Proportional Analyses
Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains

School 130 Mathematics Computation

Grade Level	1988-89 SWP Site	1988-89 LEA Sites	1988-89 Outcome	1989-90 SWP Site	1989-90 LEA Sites	1989-90 Outcome	1990-91 SWP Site	1990-91 LEA Sites	1990-91 Outcome
K	49.16	48.96	0.25	46.40	48.92	0.0	49.03	49.08	0.0
1	76.45	77.48	0.0	76.86	80.02	0.0	79.40	78.75	1.0
2	6.04	9.44		9.32	6.73		4.10	4.16	
3	5.84	6.61		1.86	1.06		-1.56	-3.19	
4	-1.72	7.41		0.67	1.50		0.03	-3.42	
5	6.43	5.40		No Grade 5			No Grade 5		
2-End	4.78	7.03	0.0	3.45	2.77	3.0	0.43	-1.30	3.0
SWP N	341			297			284		

	Positive Comparisons Divided By	Total Comparisons
Annual Result	0.25/5.25	3.00/4.25 4.00/4.25
3 Year Total		7.25/13.75

Table 3
Cohort 1 SWP Other Schools Comparison Non-Proportional Analyses
Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains

School 130 Mathematics Concepts and Applications

Grade Level	1988-89 SWP Site	1988-89 LEA Sites	1988-89 Outcome	1989-90 SWP Site	1989-90 LEA Sites	1989-90 Outcome	1990-91 SWP Site	1990-91 LEA Sites	1990-91 Outcome
K	49.16	48.96	0.25	46.40	48.92	0.0	49.03	49.08	0.0
1	76.45	77.48	0.0	76.86	80.02	0.0	79.40	78.75	1.0
2	6.04	9.44		9.32	6.73		4.10	4.16	
3	5.84	6.61		1.86	1.06		-1.56	-3.19	
4	-1.72	7.41		0.67	1.50		0.03	-3.42	
5	6.43	5.40		No Grade 5			No Grade 5		
2-End	0.86	3.41	0.0	1.88	3.55	0.0	2.86	1.50	3.0
SWP N	344			297			284		

	Positive Comparisons Divided By	Total Comparisons
Annual Result	0.25/5.25	0.00/4.25 4.00/4.25
3 Year Total		4.25/13.75

Appendix 1-B

Table 6
Cohort 1 SWP Other Schools Comparison Proportional Analyses
Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains

School 130 Mathematics Computation

Grade Level	1988-89 SWP Site	1988-89 LEA Sites	1988-89 Outcome	1989-90 SWP Site	1989-90 LEA Sites	1989-90 Outcome	1990-91 SWP Site	1990-91 LEA Sites	1990-91 Outcome
K	49.16	48.96	0.25	46.40	48.92	0.0	49.03	49.08	0.0
1	69.59	77.48	0.0	70.53	80.02	0.0	76.06	78.75	0.0
2	5.19	9.44		19.50	6.73		8.67	4.16	
3	2.93	6.61		0.85	1.06		-0.55	-3.19	
4	-11.92	7.41		-0.26	1.50		1.77	-3.42	
5	-5.25	5.40		No Grade 5			No Grade 5		
2-End	-2.02	7.03	0.0	5.61	2.77	3.0	2.77	-1.30	3.0
SWP N	179			162			162		

	Positive Comparisons Divided By	Total Comparisons
Annual Result	0.25/5.25	3.00/4.25
3 Year Total	3.00/4.25	6.25/13.75

Table 7
Cohort 1 SWP Other Schools Comparison Proportional Analyses
Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains

School 130 Mathematics Concepts and Applications

Grade Level	1988-89 SWP Site	1988-89 LEA Sites	1988-89 Outcome	1989-90 SWP Site	1989-90 LEA Sites	1989-90 Outcome	1990-91 SWP Site	1990-91 LEA Sites	1990-91 Outcome
K	49.16	48.96	0.25	46.40	48.92	0.0	49.03	49.08	0.0
1	69.59	77.48	0.0	70.53	80.02	0.0	76.06	78.75	0.0
2	5.19	9.44		19.50	7.00		8.67	4.16	
3	2.93	5.27		0.85	2.12		-0.55	-3.37	
4	-1.72	1.99		-3.74	5.02		8.82	3.25	
5	6.43	-0.81		No Grade 5			No Grade 5		
2-End	0.86	3.41	0.0	4.24	4.56	0.0	5.66	1.50	3.0
SWP N	179			162			161		

	Positive Comparisons Divided By	Total Comparisons
Annual Result	0.25/5.25	3.00/4.25
3 Year Total	0.00/4.25	3.25/13.75

Appendix 1-C

Conversion of Percentages to Arcsin Transformation

Cohort 1 Schools, Continuation Analyses 1988-89, 1989-90 and 1990-91

Comparison of Other School Comparison Methods: Proportional and Non-Proportional Selection

Code	Name	Grade Range	Proportional Selection		Non-Proportional Selection	
			Percent Positive Findings		Percent Positive Findings	
			3 Yr Avg	3rd Yr only	3 Yr Avg	3rd Yr only
130	Harrington	K-4	0.40	0.78	0.57	1.23
136	McMichael	K-8	1.02	1.57	1.02	1.57
143	Wilson	K-5	0.52	0.80	0.56	0.80
*153	Leidy	K-5	0.53	0.87	0.32	0.50
220	Alcorn	K-4	0.73	1.08	0.70	0.87
242	Reynolds	K-5	0.54	1.26	0.63	0.61
243	Palumbo	K-8	0.70	0.90	0.83	0.52
249	Waring	K-8	0.78	1.01	0.66	0.44
254	Key	K-5	0.69	0.64	0.69	0.64
259	Nebinger	K-8	0.63	0.29	0.53	0.29
273	Washington, Geo.	K-8	0.40	0.00	0.67	0.00
427	Dick	K-5	0.56	0.90	0.70	1.08
430	Heston	K-5	0.50	0.61	0.61	0.39
431	Kenderton	K-5	0.77	1.57	0.97	0.94
440	Stanton, E W	K-5	0.70	1.26	1.11	1.26
442	Walton	K-5	0.67	1.04	1.00	1.33
*443	Whittier	K-4	0.56	1.23	0.73	1.23
*444	Allen , E D	K-4	0.55	0.70	0.37	0.70
446	Duckrey	K-5	0.40	0.61	0.51	0.29
451	Douglass, F.	K-5	0.33	0.87	0.37	0.39
453	Gideon	K-5	0.60	0.94	0.38	0.55
457	Meade	K-5	0.26	0.87	0.13	0.39
526	Elkin	K-5	0.34	0.87	0.75	1.26
530	Hackett	K-5	0.62	1.26	0.78	1.26
531	Harrison	K-5	0.87	0.90	0.61	0.42
532	Hartranft	K-5	0.39	0.87	0.36	1.29
534	Ludlow	K-5	0.93	1.08	0.88	1.35
535	McKinley	K-5	0.89	1.35	0.84	1.35
547	Cramp	K-5	0.77	0.83	1.74	0.87
548	Kearny	K-5	0.55	0.55	0.44	0.24
556	Spring Garden	K-5	0.59	0.67	1.13	1.57
632	Mifflin	K-8	0.60	1.40	0.44	0.60
643	Wister	K-6	0.70	0.94	1.04	0.94
644	Linglebach	K-5	0.78	0.94	0.89	0.44
647	Kelly, J B	K-4	0.68	0.97	0.77	0.30
738	McClure	K-4	0.26	0.78	0.28	1.23
744	Taylor	K-4	0.78	0.78	0.53	0.97

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Appendix 1-D

Table 11
Cohort 1 SWP Same School Comparison Three Year Average and Third Year Analyses Citywide Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains

School 220 Mathematics Computation

Grade Level	Number of Pupils 1986	1987	1988	Average 1986-88	Number of Pupils 1989	1990	1991	Average 1989-91 3 Yr Avg	Average 1990-91 3rd Yr
0	38	59	31	46.39	14	17	24	52.94	54.96
1	51	56	71	64.80	45	24	26	78.46	77.75
2	31	15	21	7.83	63	26	43	7.25	2.68
3	32	37	21	9.91	39	45	50	3.10	-1.30
4	41	38	46	3.94	44	49	48	2.04	3.21
2-End				7.32				4.13	1.45
								3 Yr Avg	3rd Year
Positive/Total Comparisons								1.25/4.25	1.25/4.25

Table 12
Cohort 1 SWP Same School Comparison Three Year Average and Third Year Analyses Citywide Test Scores: K-1 Percent Correct, 2-End grade combined NCE Gains

School 220 Mathematics Concepts and Applications

Grade Level	Number of Pupils 1986	1987	1988	Average 1986-88	Number of Pupils 1989	1990	1991	Average 1989-91 3 Yr Avg	Average 1990-91 3rd Yr
0	38	59	31	46.39	14	17	24	52.94	54.96
1	51	56	71	64.80	45	24	26	78.46	77.75
2	31	15	21	7.88	63	26	43	7.25	2.68
3	34	38	21	8.78	38	44	50	0.49	-3.42
4	43	43	32	3.92	43	49	50	4.09	6.34
2-End				6.86				3.94	1.83
								3 Yr Avg	3rd Year
Positive/Total Comparisons								1.25/4.25	1.25/4.25

Appendix 1-E

Cohort 1 Schools, Continuation Analyses 1985-86 Through 1990-91

Same School Analyses: Three Year Average and Third Year Only

NCEs Gains on CTBS Form U Grades 2 Through End-Grade

Code	Name	Grade Range	Reading/Language Arts			Mathematics Computation			Math Concepts & Appl'tions		
			Pre	3 Yr Avg	3rd Yr	Pre	3 Yr Avg	3rd Yr	Pre	3 Yr Avg	3rd Yr
130	Harrington	K-4	3.78	2.13	1.61	9.56	2.92	0.43	8.16	3.31	2.86
136	McMichael	K-8	3.82	0.91	3.29	9.90	3.65	5.56	9.50	1.57	4.16
143	Wilson	K-5	3.95	3.25	0.96	12.28	2.33	-2.63	7.66	3.05	2.39
*153	Leidy	K-5	7.31	0.41	-0.72	13.42	5.80	5.03	14.61	2.53	3.21
220	Alcorn	K-4	5.64	2.28	1.33	7.23	4.13	1.45	6.86	3.94	1.83
242	Reynolds	K-5	4.97	0.93	0.27	10.45	3.92	4.20	7.74	1.94	1.58
243	Palumbo	K-8	4.01	0.69	0.18	10.62	3.56	-6.30	8.29	1.42	-2.46
249	Waring	K-8	5.77	1.09	-2.22	13.25	8.21	2.22	10.55	5.55	5.21
254	Key	K-5	6.11	2.54	0.36	10.60	3.63	2.20	9.31	2.62	4.74
259	Nebinger	K-8	4.67	0.46	-3.30	12.26	4.08	-1.59	14.17	0.57	2.28
273	Washington	K-8	4.73	0.96	-4.89	9.53	2.42	-6.29	9.07	3.35	-1.86
427	Dick	K-5	5.67	2.70	5.03	11.52	4.96	3.34	10.29	6.27	6.85
430	Heston	K-5	7.76	1.19	-2.85	20.35	3.01	-1.90	17.72	2.44	0.49
431	Kenderton	K-5	7.25	2.88	0.74	8.82	4.34	-0.38	7.33	3.06	-0.45
440	Stanton,MH	K-5	6.75	3.79	4.97	11.45	6.43	7.57	19.33	5.76	7.44
442	Walton	K-5	4.44	2.45	1.31	13.95	6.13	2.78	11.25	6.83	4.09
*443	Whittier	K-4	4.60	1.83	3.11	8.40	4.01	3.30	6.91	4.66	4.11
*444	Allen ,ED	K-4	5.67	1.37	0.07	10.46	3.21	7.44	8.30	0.95	5.15
446	Duckrey	K-5	4.57	0.99	-0.18	9.03	5.56	-0.20	7.21	4.66	-0.54
451	Douglass,F	K-5	2.62	1.11	2.62	9.77	2.36	0.17	9.48	2.88	3.67
453	Gideon	K-5	5.62	0.78	4.20	17.61	3.40	-1.89	14.77	0.79	-0.67
457	Meade	K-5	3.66	1.07	0.18	9.46	0.01	-0.01	9.02	2.61	3.46
526	Elkin	K-5	7.11	2.28	3.14	13.89	6.07	4.23	5.60	5.27	5.80
530	Hackett	K-5	6.51	3.44	1.13	12.23	5.49	4.08	10.36	3.56	4.24
531	Harrison	K-5	4.42	2.80	-1.91	9.87	5.52	1.82	9.02	3.17	0.44
532	Hartranft	K-5	5.05	0.65	0.14	11.51	2.12	0.71	9.61	0.19	-1.79
534	Ludlow	K-5	4.71	3.74	3.04	6.22	3.49	5.58	6.62	3.55	3.98
535	McKinley	K-5	3.98	3.26	0.71	5.73	5.20	7.26	7.38	4.98	6.45
547	Cramp	K-5	3.87	3.77	4.28	6.97	6.40	8.11	7.32	6.20	7.20
548	Kearny	K-5	4.92	1.23	-4.45	10.12	4.63	2.03	8.97	1.62	-1.78
556	Spring Gdn	K-5	5.75	3.18	2.95	15.78	6.60	5.67	13.28	5.59	0.67
632	Mifflin	K-8	5.31	0.66	-0.47	12.30	4.88	7.32	10.15	-0.12	-0.32
643	Wister	K-6	8.86	6.25	8.25	19.14	5.94	4.94	15.32	7.76	9.74
644	Linglebach	K-5	7.28	3.69	-0.39	10.49	8.60	5.77	11.71	5.36	-1.89
647	Kelly, JB	K-4	4.44	2.04	2.04	11.44	2.67	-2.29	11.36	3.98	1.90
738	McClure	K-4	3.74	0.91	2.48	9.36	0.78	4.83	7.77	1.00	4.44
744	Taylor	K-4	5.61	3.59	1.08	14.08	8.13	8.69	10.78	8.32	11.09

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Appendix 1-F

Alternative Indicator, Reduction in Children Requirering Service
Cohort 1 Schoolwide Project Schools, 1988-89, 1989-90, 1990-91, 1991-92
Percent Chapter 1 Eligible Based on Midyear Citywide Testing*

		1988		1989		1990		1991	
Code	Name	N	%	N	%	N	%	N	%
130	Harrington	731	66.60%	694	68.00%	685	65.50%	675	56.10%
136	McMichael	573	65.80%	555	57.80%	590	54.20%	633	54.80%
143	Wilson	296	67.60%	301	63.10%	275	61.50%	251	61.80%
220	Alcorn	512	71.90%	523	67.10%	541	64.00%	316	61.70%
242	Reynolds	603	66.80%	589	68.60%	539	59.40%	563	64.30%
243	Palumbo	287	69.00%	281	65.10%	281	65.10%	219	58.00%
249	Waring	356	68.30%	387	68.50%	376	64.90%	392	61.20%
254	Key	365	64.90%	457	61.90%	529	60.90%	502	53.40%
259	Nebinger	296	64.50%	310	56.10%	292	50.30%	223	45.70%
273	Washington, G	304	64.10%	285	64.60%	305	51.50%	309	54.70%
427	Dick	502	82.10%	461	68.30%	430	60.90%	447	55.30%
430	Heston	597	56.10%	581	53.40%	581	53.50%	602	62.10%
431	Kenderton	529	65.80%	466	62.90%	452	59.30%	465	50.80%
433	Leidy	381	67.50%	321	67.90%	342	62.30%	316	61.70%
440	Stanton, M H	595	59.30%	605	63.60%	580	57.60%	587	53.50%
442	Walton	517	61.30%	480	55.80%	431	56.60%	413	54.00%
443	Whittier	665	64.10%	691	63.70%	707	55.00%	740	53.10%
444	Allen , E D	601	63.10%	594	64.80%	951	60.90%	592	57.30%
446	Duckrey	636	65.90%	601	58.60%	612	58.50%	672	62.20%
451	Douglass, F.	627	76.90%	624	70.80%	687	64.30%	638	65.50%
453	Gideon	386	58.30%	396	61.60%	393	60.10%	412	57.50%
457	Meade	691	67.00%	674	68.70%	737	69.20%	776	67.30%
526	Elkin	806	69.10%	937	64.40%	966	60.20%	999	58.70%
530	Hackett	419	57.30%	413	47.90%	382	52.10%	435	43.20%
531	Harrison	412	66.40%	391	60.10%	410	59.80%	369	64.80%
532	Hartranft	833	70.10%	750	71.90%	771	71.70%	763	72.60%
534	Ludlow	473	76.50%	389	65.30%	418	62.20%	432	65.30%
535	McKinley	440	81.60%	374	69.50%	381	66.90%	361	69.80%
547	Cramp	728	80.40%	874	78.10%	941	70.90%	944	70.20%
548	Kearny	421	75.80%	411	61.80%	359	63.20%	370	62.20%
556	Spring Garden	426	58.20%	398	52.30%	395	56.50%	371	39.40%
632	Mifflin	416	57.50%	389	46.50%	320	47.50%	399	47.40%
643	Wister	578	52.60%	565	49.40%	592	56.40%	516	45.00%
644	Linglebach	363	55.10%	329	47.10%	307	38.40%	302	42.40%
647	Kelly, J B	927	68.30%	901	66.50%	879	64.80%	894	67.90%
738	McClure	970	78.10%	869	76.50%	897	73.00%	831	71.70%
744	Taylor	633	83.10%	687	79.50%	729	82.40%	559	71.90%

Note: Selection Criterion using the most restictive parameters for grades K-4 < 41 NPR; grades 6-8 < 26NPR. Unduplicated Count of any Eligible Service (Reading and Math)

Appendix 1-G

Alternative Indicator, Report Card Marks for Reading, Mathematics, Science and Social Studies
Cohort 1 Schoolwide Project Sites Showing the Percentage of All Students Receiving Final
Report Card Marks of A, B, or C for Preprogram Year 1988 and Three Program Years 1989-91

Code	Name	Reading				Mathematics				Science				Social Studies			
		1988	1989	1990	1991	1988	1989	1990	1991	1988	1989	1990	1991	1988	1989	1990	1991
130	Harrington	61.0	65.0	66.8	69.5	63.0	60.0	71.2	80.2	91.0	88.0	92.0	94.3	82.0	73.0	82.6	88.2
136	McMichael	62.0	80.0	75.7	74.5	59.0	59.0	67.0	74.4	69.0	79.0	78.5	84.8	75.0	77.0	80.2	82.9
143	Wilson	73.0	70.0	87.9	86.2	62.0	67.0	83.0	61.2	71.0	82.0	88.7	85.4	71.0	73.0	87.9	87.5
220	Alcorn	54.0	61.0	64.7	64.6	53.0	58.0	54.3	72.4	86.0	66.0	66.0	83.4	71.0	68.0	70.1	75.1
242	Reynolds	65.0	77.0	70.5	70.5	60.0	62.0	63.6	68.3	64.0	74.0	70.4	76.1	73.0	78.0	78.0	76.9
243	Palumbo	60.0	53.0	52.3	71.4	55.0	60.0	61.2	63.8	67.0	70.0	74.5	81.2	62.0	67.0	65.2	81.6
249	Waring	82.0	78.0	85.7	87.7	69.0	71.0	81.9	85.3	74.0	86.0	86.8	82.5	75.0	76.0	83.6	84.9
254	Key	71.0	81.0	62.7	77.9	70.0	76.0	76.2	80.9	71.0	85.0	81.2	89.9	73.0	77.0	76.2	86.4
259	Nebinger	78.0	77.0	74.3	82.3	69.0	59.0	53.3	71.9	73.0	72.0	67.3	80.0	72.0	55.0	66.5	66.9
273	Washington, G	84.0	80.0	79.8	78.4	74.0	72.0	73.0	70.7	77.0	79.0	76.1	79.5	85.0	85.0	77.5	76.4
427	Dick	74.0	71.0	69.4	80.2	59.0	67.0	71.3	79.7	74.0	83.0	89.8	96.7	65.0	72.0	76.4	88.5
430	Heston	84.0	81.0	82.2	68.1	69.0	67.0	73.6	74.6	70.0	76.0	84.4	81.0	70.0	75.0	79.2	78.4
431	Kenderton	66.0	58.0	61.6	65.7	59.0	59.0	61.8	73.6	74.0	72.0	76.1	77.3	73.0	67.0	74.1	77.4
433	Leidy	86.0	78.0	74.2	80.7	77.0	73.0	68.4	77.9	79.0	84.0	81.5	86.4	80.0	86.0	80.4	81.2
440	Stanton, M H	66.0	66.0	66.6	84.8	56.0	66.0	68.8	88.3	76.0	90.0	86.6	98.8	73.0	74.0	66.8	94.3
442	Walton	44.0	54.0	68.4	66.8	47.0	60.0	58.2	70.4	76.0	76.0	78.4	83.9	67.0	70.0	68.2	81.5
443	Whittier	65.0	NA	70.8	78.7	69.0	68.0	74.5	75.9	83.0	83.0	88.9	93.3	77.0	82.0	85.4	86.7
444	Allen , E D	68.0	63.0	73.0	78.4	75.0	84.0	82.3	92.0	91.0	97.0	96.7	99.3	90.0	92.0	94.7	95.0
446	Duckrey	84.0	72.0	76.4	68.8	64.0	68.0	70.9	74.8	82.0	78.0	80.6	82.9	79.0	76.0	81.6	83.5
451	Douglass, F.	67.0	67.0	69.8	71.7	70.0	70.0	72.4	78.8	78.0	85.0	79.4	83.2	78.0	65.0	66.7	79.3
453	Gideon	86.0	82.0	79.8	71.5	76.0	65.0	64.1	73.7	74.0	76.0	72.6	87.4	78.0	72.0	67.4	84.8
457	Meade	66.0	71.0	64.4	66.7	67.0	71.0	70.1	72.8	80.0	79.0	74.9	82.8	79.0	78.0	73.1	80.2
526	Elkin	62.0	62.0	56.8	74.4	62.0	65.0	68.0	75.9	73.0	71.0	77.1	85.7	75.0	69.0	75.3	84.3
530	Hackett	74.0	67.0	74.3	81.1	77.0	75.0	79.6	89.7	85.0	87.0	94.2	97.7	82.0	85.0	85.6	90.4
531	Harrison	63.0	66.0	71.1	70.9	68.0	69.0	67.3	71.9	78.0	84.0	86.5	84.7	81.0	75.0	78.1	81.9
532	Hartranft	57.0	45.0	53.2	58.7	65.0	66.0	60.0	73.7	94.0	86.0	83.4	91.0	86.0	82.0	78.9	82.9
534	Ludlow	48.0	52.0	69.2	68.3	68.0	69.0	64.9	63.5	70.0	NA	78.9	80.1	70.0	74.0	71.0	71.0
535	McKinley	56.0	63.0	62.5	75.5	60.0	70.0	63.3	79.8	83.0	82.0	80.3	84.3	71.0	74.0	79.8	79.7
547	Cramp	56.0	50.0	61.7	60.0	58.0	63.0	64.4	77.5	70.0	79.0	78.2	85.3	77.0	80.0	77.7	87.3
548	Kearny	74.0	63.0	72.3	74.7	60.0	66.0	75.4	85.3	75.0	80.0	88.2	90.5	77.0	78.0	85.9	91.5
556	Spring Garden	75.0	76.0	75.9	78.7	61.0	67.0	74.5	77.8	73.0	84.0	81.0	79.2	74.0	82.0	77.4	79.0
632	Mifflin	49.0	61.0	59.6	74.2	NA	64.0	67.2	73.2	61.0	72.0	74.6	86.6	64.0	NA	71.8	82.1
643	Wister	71.0	72.0	72.1	81.0	58.0	66.0	54.4	78.1	50.0	65.0	56.4	76.0	72.0	69.0	62.4	82.0
644	Linglebach	74.0	74.0	89.7	78.0	66.0	75.0	86.7	92.0	82.0	93.0	98.5	98.8	82.0	89.0	92.1	94.4
647	Kelly, J B	54.0	60.0	70.0	68.2	69.0	72.0	78.2	82.3	87.0	93.0	88.3	93.0	89.0	93.0	92.8	91.2
738	McClure	61.0	70.0	67.5	60.4	76.0	72.0	74.6	77.4	89.0	79.0	84.2	83.6	77.0	81.0	78.6	81.3
744	Taylor	40.0	43.0	52.1	66.1	63.0	70.0	65.8	79.3	75.0	75.0	76.4	82.5	68.0	67.0	64.7	78.6
SWP Sites with higher percentages of A, B, and C's on final report in 1991 than 1988					30				33				34				35

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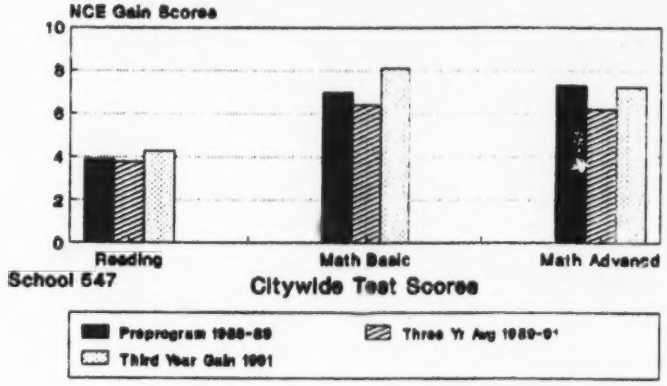
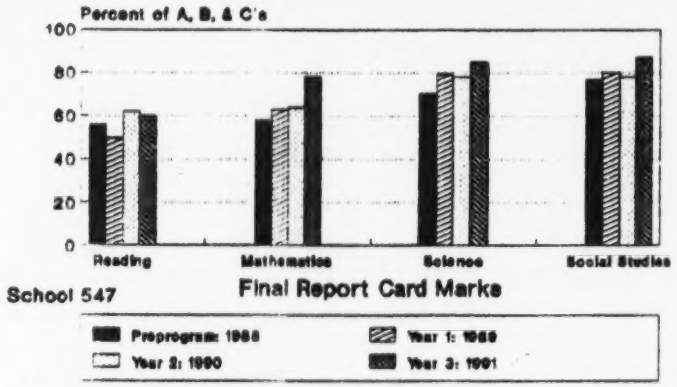
Same School Comparison Model
NCE Gain Scores 1985 - 1991

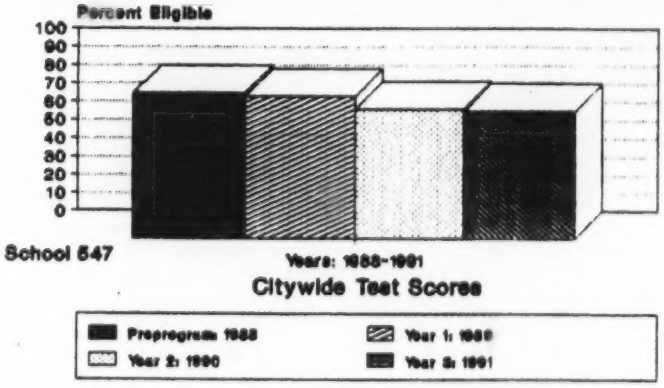


Report Card Marks: A, B, & C's
Final Marks for All Students

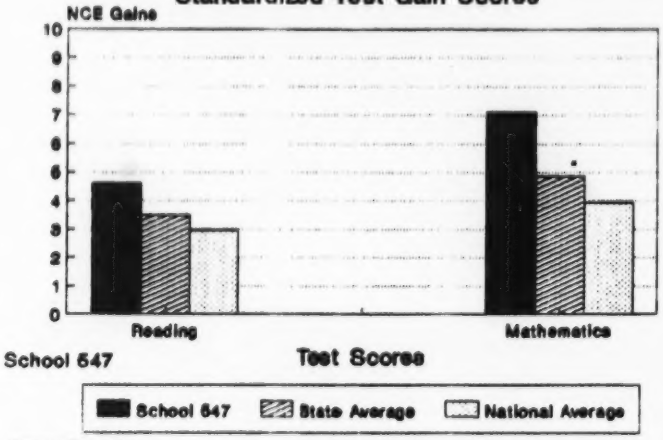


Appendix 1-H: Indicator Display

Reduction in Chapter 1 Students
Requirering Services 1988-1991



Comparison to the State and the Nation
Standardized Test Gain Scores



Grades 2-6 only.